



# WOUNDED WARRIOR REGIMENT

## Fact Sheet | Traumatic Brain Injury

Traumatic Brain Injury (TBI) has become one of the signature injuries of Operation ENDURING FREEDOM (OEF)/Operation IRAQI FREEDOM (OIF). TBI is traumatically induced structural injury and/or physiological disruption of brain function as a result of an external force. The source of this injury is often exposure to a concussive blast (i.e. IEDs, RPGs, land mines, mortar and artillery detonations) or a penetrating or open head injury. However, TBI can also stem from an event such as a fall, motor vehicle accident, shooting, sporting, or training injury.



### How to recognize Traumatic Brain Injury

TBI symptoms fall into three categories: Physical, Mental, and Behavioral/Emotional:

#### Physical Symptoms

Headaches, dizziness, balance disorder, nausea, fatigue, sleep disturbance, blurred vision, light sensitivity, hearing loss, noise sensitivity, seizures, transient neurological abnormalities, numbness and tingling.

#### Mental Symptoms

Difficulties with attention, concentration, memory, processing speed, judgment, executive control.

#### Behavior/Emotional Symptoms

Depression, anxiety, agitation, irritability, impulsivity, aggression.

### TBI Prognosis

TBI prognosis varies based on the individual and the brain injury. Most patients will recover completely within days to weeks after the injury; however, a few may experience residual symptoms lasting months or even years. Those suffering from TBI can be grouped into four levels of severity:

Level One Mild	A confused or disoriented state lasting 24 hours or less; loss of consciousness for up to 30 minutes; and memory loss lasting less than 24 hours. Approximately 85-90 percent of combat exposed troops who sustain a mild TBI experience a complete resolution of symptoms within the first several days to weeks after the incident. All service members diagnosed with a Mild TBI injury are encouraged to follow up with their provider between 4 and 6 weeks to ensure full symptom resolution.
Level Two Moderate	A confused or disoriented state that lasts more than 24 hours; loss of consciousness for more than 30 minutes but less than 24 hours; and memory loss lasting for more than 24 hours, but less than seven days.
Level Three Severe	A confused or disoriented state that lasts more than 24 hours; loss of consciousness for more than 24 hours and memory loss for seven days or more. A moderate or severe TBI injury, if left untreated, may worsen and result in permanent disability, or even death.
Level Four	Penetrating or open head injury: the outer layer of the brain is penetrated by a foreign object.

# TBI Screening and Identification

Medical evaluations are now mandatory following operational events such as exposure to blasts. A standardized TBI evaluation includes the Military Acute Concussion Evaluation tool (MACE) to identify service members at high risk for possible TBI. The MACE is a tool that can be used for any acute concussion and is ideally administered within 72 hours of injury.



During a deployment, a TBI screening takes place any time a servicemember is evacuated from theater to Landstuhl Regional Medical Center for

battle or non-battle injuries or illnesses. Additionally, all service members returning from deployment must undergo the post-deployment health assessment, which identifies those who were exposed to an injury event, lost consciousness, had or still have concussive symptoms. Three to six months later, servicemembers complete a follow-up post-deployment health reassessment.

Any servicemember entering a Veterans Affairs medical center for clinical care undergoes TBI screening similar to the initial post-deployment health assessment. If a servicemember self-reports that they may have experienced a TBI, a primary care provider conducts a confirmation evaluation, documents in the patient's electronic medical record and starts treatment for those with persistent symptoms.

Treating TBI may not always involve providers in just one medical specialty. Rather, addressing TBI should be viewed as an interdisciplinary effort including neurology, neurosurgery, psychiatry, neuropsychology, medicine and rehabilitation.

**For assistance or to receive additional information contact**

WWR TBI Coordinator at 703-784-3695

**Defense Center of Excellence for Medical Multimedia:**

[www.dcoe.mil/traumaticbraininjury.aspx](http://www.dcoe.mil/traumaticbraininjury.aspx)

**Traumatic Brain Injury Website**

[www.traumaticbraininjuryatoz.org](http://www.traumaticbraininjuryatoz.org)